

Joule Heating System

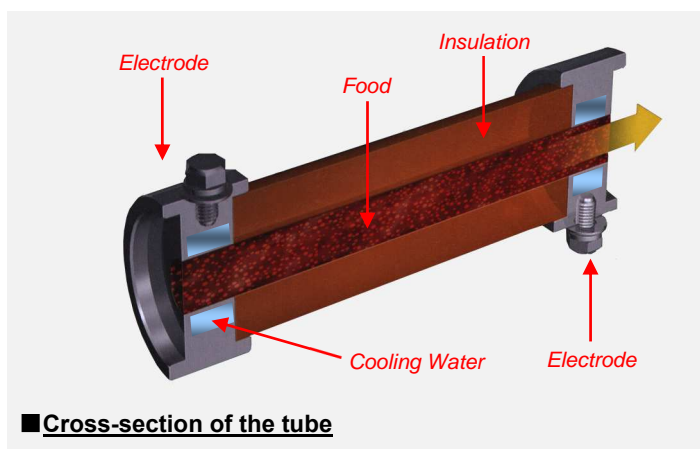
 Chiyodagumi Asia-Pacific Co., Ltd.

What is Joule Heating System?

Joule heating, also known as resistive heating, is the process by which the passage of an electric current through a conductor produces heat. For example, an electric heater is an electrical device that converts electric current to heat. The heating element inside every electric heater is an electrical resistor, and works on the principle of Joule heating.



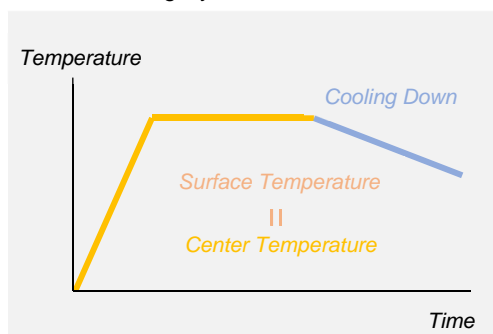
In our Joule Heating System, an electric current passing through food will convert that electrical energy into heat energy and sterilize food by heating.



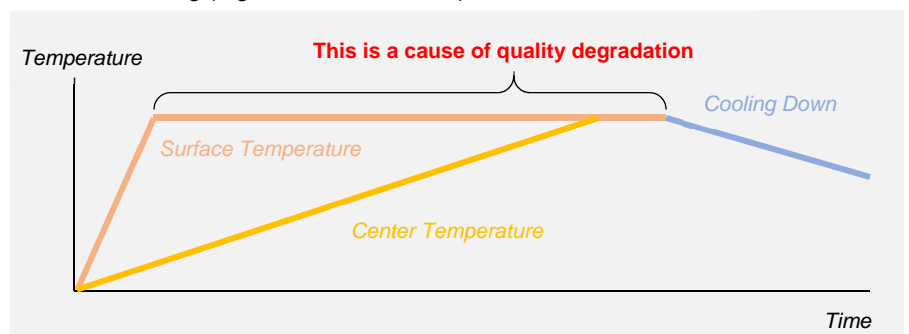
The strong points of Joule Heating System

- Joule Heating System can heat food rapidly and uniformly, and sterilize it in a short time because food get self-heated by passage of current.

■ Joule Heating System



■ Indirect Heating (e.g. Retort Sterilization)



Joule Heating System never deteriorates in quality of food due to direct heating. The color, flavor and taste are not changed.

- Joule Heating System never scorch food. There is no part which the temperature is higher than food because this system is not indirect heating.

■ The products which can be sterilized by Joule Heating System



Low-viscosity Food

Milk, Whipping cream, Sauce, Dressing, Sake, Fruit juice, etc.



Mid-viscosity Food

Soup, Fruit sauce, Extract, Ketchup, Tomato puree, Tartar sauce, Liquid egg, etc.



High-viscosity Food

Processed cheese, Concentrated food, Custard cream, Miso (Soybean paste), Bean jam, Plum jam, Honey, etc.



Ground Food

Grated ginger, Grated wasabi, Grated radish, Grated garlic, Vegetable pulp, Soy pulp, etc.



Liquid Food containing movable solids

Fruit preparation, Jam, Curry sauce, Soup with ingredients, Filling for bread, etc.



Others

Potato salad, Kimchi (Korean pickles), Flaked tuna with mayonnaise, etc.

■ Examples of Installation

1. Aquamar Inc. (USA): Club Stick
 2. Food processing company (JPN): Liquid egg
 3. Big seasoning company (JPN): Mayonnaise / Dressing / Sauce
 4. Daily Foods Corporation (JPN): Preparation of fruit (for Star Bucks)
 5. Big spice company (JPN): Grated ginger / Mustard / Spices
 6. Big seasoning company (JPY): Ketchup / Tomato puree
 7. Food processing company (JPN): Custard cream (for the products of big chain store)
 8. Ichiban Foods Co., Ltd. (JPN): Sauce / Soup
 9. Pokka Sapporo Food and Beverage Ltd. (JPN): Fruit juice
- and many companies has already been using Joule Heating System!!



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